ABSTRACT OF THE DISCLOSURE

In a technique for video segmentation, classification and summarization based on the singular value decomposition, frames of the input video sequence are represented by vectors composed of concatenated histograms descriptive of the spatial distributions of colors within the video frames. The singular value decomposition maps these vectors into a refined feature space. In the refined feature space produced by the singular value decomposition, the invention uses a metric to measure the amount of information contained in each video shot of the input video sequence. The most static video shot is defined as an information unit, and the content value computed from this shot is used as a threshold to cluster the remaining frames. The clustered frames are displayed using a set of static keyframes or a summary video sequence. The video segmentation technique relies on the distance between the frames in the refined feature space to calculate the similarity between frames in the input video sequence. The input video sequence is segmented based on the values of the calculated similarities. Finally, average video attribute values in each segment are used in classifying the segments.